

## **Remarks**

### **Status of the Claims**

Claims 1, 2 and 5-8 were pending. Claims 57-61 have been added. Support for these amendments can be found throughout the specification. Claims 1, 2, 51, 53, and 55 have been amended. The amendments to the claims are grammatical in nature. Upon entry of this amendment claims 1, 2, 5-8 and 51-61 will be pending. No new matter has been added.

Applicants acknowledge that claims 51-56 have been indicated as allowed.

### **Priority**

The Office alleges, that “for the purposes of applying prior art, this application has been afforded an effective filing date of 22 December, 2000” because the other applications to which the present application claims priority, U.S. Serial No. 09/006,678, filed January 13, 1998, and U.S. Provisional Serial No. 60,047,226, filed May 20, 1997, allegedly fail to provide adequate support for the claimed invention. Applicants respectfully disagree.

The Office alleges that the prior filed applications disclose a subset of multiple membrane spanning proteins, virus receptor proteins, and that the description describing these virus receptor proteins does not adequately support, “multiple membrane spanning protein,” used in claim 1. The Office alleges that the applications only disclose cellular virus receptor proteins and that “although two of the disclosed cellular virus receptor proteins were also multiple membrane spanning proteins . . . there was no discussion of virus-like particles simply comprising multiple membrane spanning proteins, particularly those that are not necessarily cellular virus receptor proteins.” *Office Action*, at 3. The Office also notes that the multiple membrane spanning proteins CXCR2, CXCR3, mu-opoid, and KCNH2 potassium channel protein are not disclosed in either the ‘226 or the ‘678 applications. The Office alleges that because “the only discussion in these earlier applications is clearly directed toward cellular virus receptor proteins” the present application is not entitled to priority to the ‘226 application or the ‘678 application. *Id.* Applicants respectfully disagree.

Applicants incorporate the previous response that argued that claim 1 was adequately described in the priority applications and is entitled to the priority dates of the '226 and the '678 applications.

Applicants also respectfully assert that claim 57 is entitled to priority date of the '226 and the '678 applications. The priority applications adequately describe claim 57 because the descriptions contained in the two priority documents “would immediately convey” to a person skilled in the art that the applicant invented a virus like particle comprising a heterologous G-protein coupled receptor. *In re Smythe*, 480 F.2d 1376, 1384 (C.C.P.A. 1973). Whether an application adequately describes an invention requires that the application “reasonably convey to a person skilled in the art that the inventor had possession of the claimed subject matter at the time of the earlier filing date.” *Bilstad v. Wakalopoulos*, 386 F.3d 1116, 1123 (Fed. Cir. 2004). Furthermore, to satisfy the written description requirement the specification “need not provide *in heac verba* support for the claimed subject matter at issue.” *Lampi Corp. v. American Power Products, Inc.*, 228 F.3d 1365, 1378 (Fed. Cir. 2000).

A particle comprising a heterologous “G-protein coupled receptor” is adequately described in the priority documents because the term is explicitly used. For example, the '678 application describes the incorporation of G-protein coupled receptors (*e.g.* chemokine receptors) into the claimed particles. The '678 application states that chemokine receptors are G-protein coupled receptors. (See, page 4, line 12). The '678 application also describes incorporating the G-protein coupled receptors into the particles (See, for example, 14, last full paragraph).

Particles comprising a heterologous G-protein coupled receptor are also described in the '226 application. The '226 application describes particles comprising a heterologous G-protein coupled receptor (*e.g.* chemokine receptor). (See, for example, pages 8-9 of the '226 application). Therefore, one of skill in the art would understand that Applicants adequately described a particle as claimed comprising a heterologous G-protein coupled receptor because specific examples are provided that incorporate such a protein. As Applicants have previously stated in the prior response, the priority applications describe the incorporation of chemokine receptors generally and Applicants note that not all chemokine receptors are virus receptor proteins. For example, in the '226 and '678 applications there are numerous textual references to

multiple membrane spanning proteins and G-protein coupled receptors being incorporated into particles. Specifically, in the '678 application the specification states that the particles can incorporate multiple membrane spanning proteins and then provides specific examples that include G-protein coupled receptors (*e.g.* CCR5 and CXCR4). (See, '678 specification, p. 4, lines 12-14, p. 16, lines 2-5)

Accordingly, Applicants have provided adequate written description in both the '226 application and the '678 application and the present application is entitled to claim priority to each. In view of the foregoing, Applicants respectfully request that the effective filing date of the present application be the filing date of the '226 provisional application and that the Office state that the claim to priority is proper.

### ***Rejections under 35 U.S.C. § 102***

Claims 1 and 5-8 are rejected under 35 U.S.C. § 102(a) as allegedly being anticipated by Hoffman et al. Proc. Natl. Acad. Sci. U. S. A., 97(21): 11215-11220. Applicants respectfully disagree because as previously stated the present application is entitled to a priority date that predates the Hoffman reference. However, in order to further prosecution, Applicants enclose herewith a declaration under 37 C.F.R. § 1.132 executed by inventors of the present application stating that the reference is work of their own and that the co-authors listed on the Hoffman reference are not co-inventors and were working under the direction and/or supervision of at least one of the presently named inventors. Accordingly, the Hoffman reference is not available as a reference under 35 U.S.C. § 102(a) and, therefore, cannot anticipate the pending claims.

Claims 1, 2, and 5-7 stand rejected under 35 U.S.C. § 102(a) as allegedly being anticipated by Hunt (WO 01/2551 A2). The Hunt reference fails to anticipate the pending claims because it is not available as prior art. The Hunt reference is a WIPO (PCT) publication. The Hunt reference was published on January 11, 2001. The Office alleges that the effective filing date of the pending claims December 22, 2000. Although Applicants respectfully disagree with the Office's determination of the effective filing date, regardless December 22, 2000 predates the

publication of the Hunt reference. Therefore, the Hunt reference is not available as prior art under 35 U.S.C. § 102(a).

The Hunt reference is also not available under 35 U.S.C. § 102(e). The Hunt reference has an international filing date of June 26, 2000. The Hunt reference would only be available under 35 U.S.C. § 102(e) if it had been filed on or after November 29, 2000 (see M.P.E.P. 706.02(f)(1)). Accordingly, the Hunt reference is only prior art as of its publication date. Since the publication date of the Hunt reference is after the alleged effective filing date of the present application as determined by the Office the Hunt reference cannot be prior art under 35 U.S.C. § 102(a) or 35 U.S.C. § 102(b). Accordingly, the Hunt reference fails to anticipate the pending claims.

Accordingly, Applicants respectfully request that the rejections under 35 U.S.C. § 102(a) be withdrawn.

**Conclusion**

Claims 1, 2, 5-8, and 51-61 are in condition for allowance. A notice of allowance is earnestly solicited. Applicants invite the Examiner to contact the undersigned at 610.640.7820 to clarify any unresolved issues raised by this response.

The Commissioner is hereby authorized to charge any deficiencies of fees and credit of any overpayments to Deposit Account No. 50-0436.

Respectfully submitted,

/Daniel M. Scolnick, Reg. No. 52,201/  
Daniel M. Scolnick, Ph.D.  
Registration No. 52,201

Dated: **May 26, 2009**  
PEPPER HAMILTON, LLP  
400 Berwyn Park  
899 Cassatt Road  
Berwyn, PA 19312-1183  
Telephone: 610-640-7855  
Facsimile: 610-640-7835